

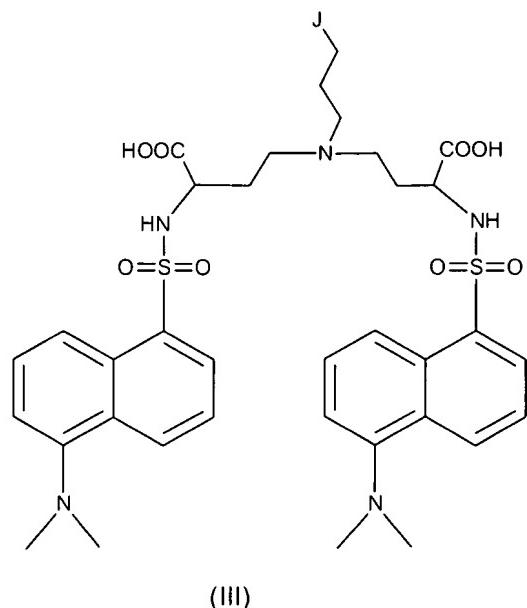
### Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

#### **Listing of claims:**

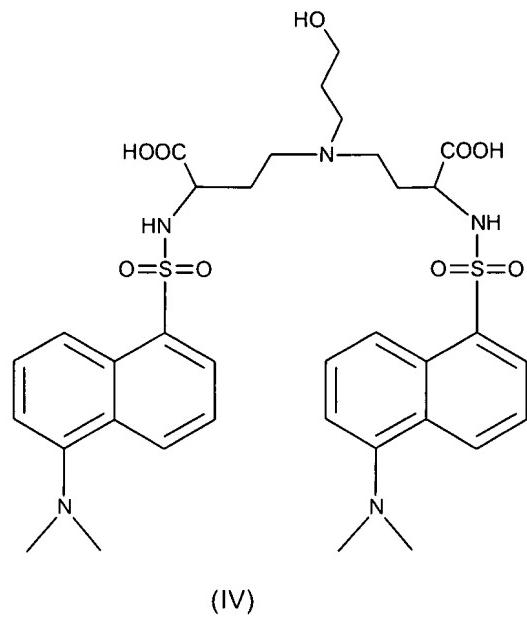
Claims 1-84. (Canceled)

85. (Currently Amended) The compound of Claim 84- A compound represented by the structure set forth in formula (III):



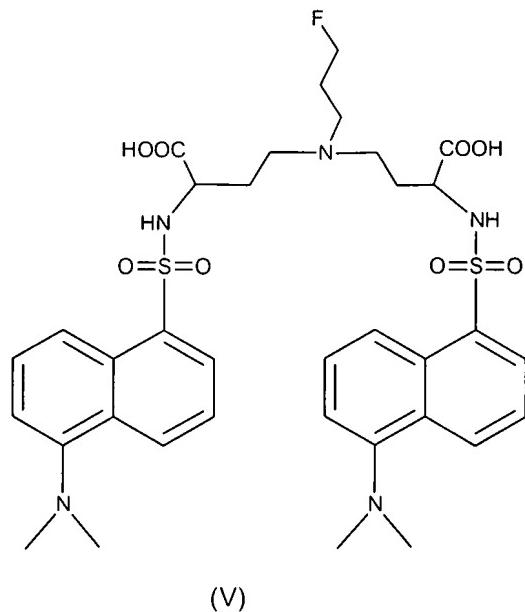
wherein J is selected from the group consisting of hydrogen, -OH, and -Q; wherein said Q is selected from the group consisting of an N<sub>2</sub>S<sub>2</sub> chelator and -F; and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of the formula III.

86. (Previously Presented) The compound of Claim 85 represented by the structure set forth in formula (IV):



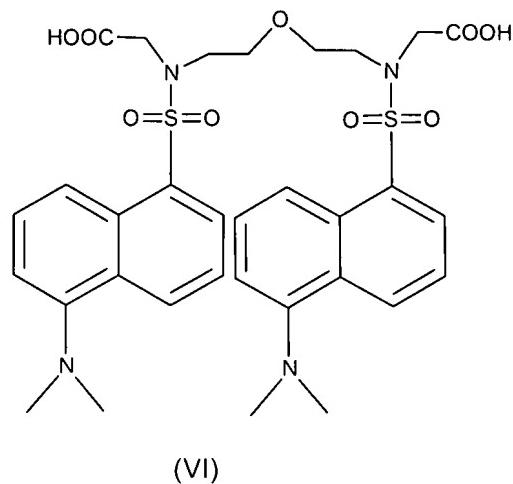
and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of the formula IV.

87.(Previously Presented) The compound of Claim 85 represented by the structure set forth in formula V:



and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of formula (V).

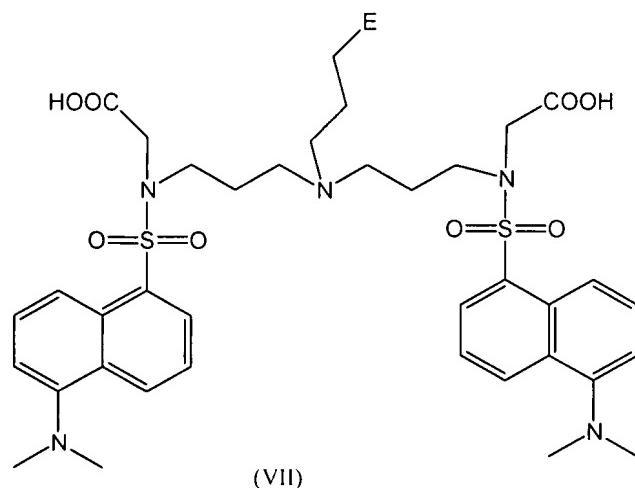
88. (Previously Presented) The compound of Claim 85 represented by the structure set forth in formula VI:



(VI)

and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of formula (VI).

89. (Currently Amended) ~~The compound of Claim 84-~~ A compound represented by the structure set forth in formula VII:

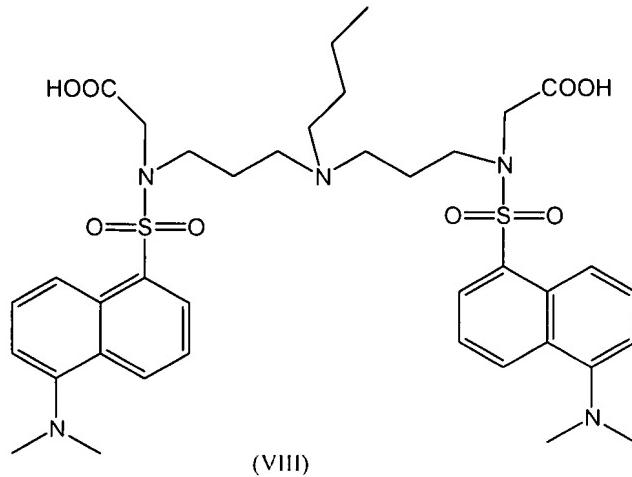


(VII)

wherein E is selected from -OH, -F, -CH<sub>3</sub> and Q; wherein said Q is selected from an N<sub>2</sub>S<sub>2</sub> chelator and -F;

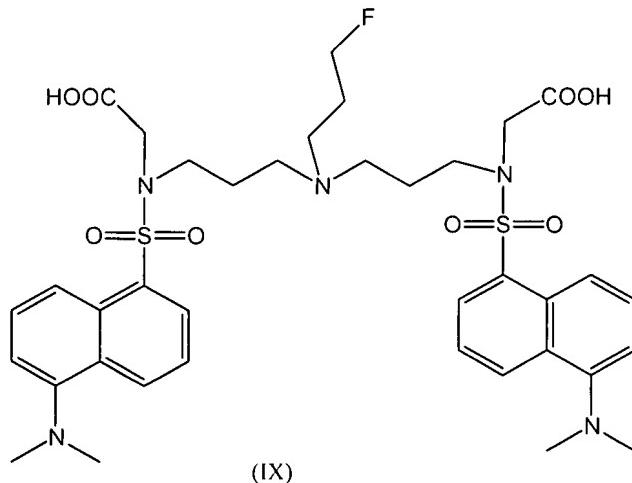
and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of formula (VII).

90.(Previously Presented) The compound of Claim 89 represented by the structure set forth in formula VIII:



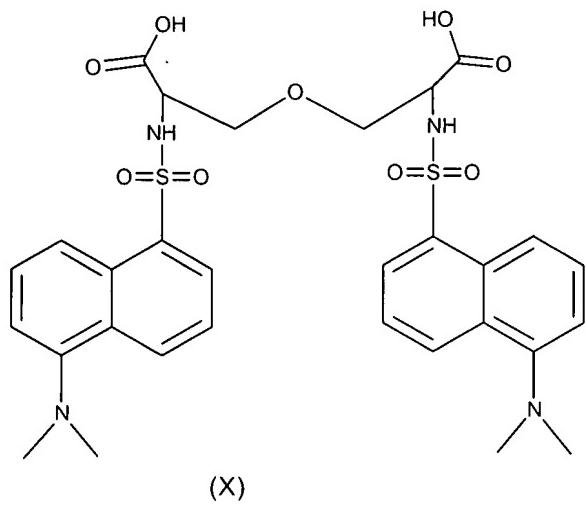
and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of formula (VIII).

91.(Previously Presented)The compound of Claim 89 represented by the structure set forth in formula IX:



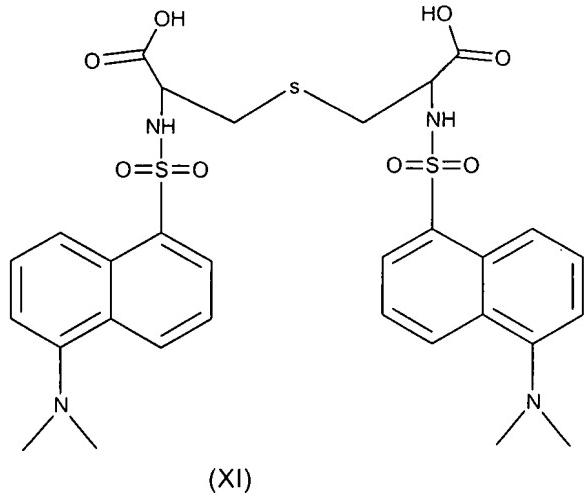
and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of formula (IX).

92.(Currently Amended) ~~The compound of Claim 84~~ A compound represented by the structure set forth in formula X:



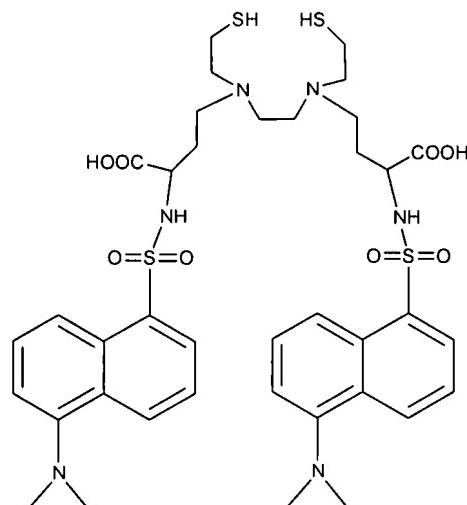
and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of formula (X).

93. (Currently Amended) ~~The compound of Claim 84~~ A compound represented by the structure set forth in formula XI:



and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of formula (XI).

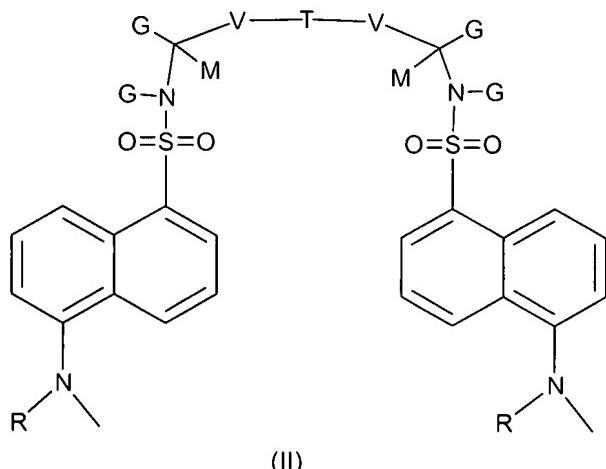
94. (Currently Amended) ~~The compound of Claim 84~~ A compound represented by the structure set forth in formula XII:



(XII)

and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of the formula XII.

95. (Currently Amended) The compound of Claim 84 A compound represented by the structure set forth in formula (II):



(II)

and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of the formula II;

wherein G groups may be the same or different and are selected independently from hydrogen, -(CH<sub>2</sub>)<sub>m</sub>(COOH) and COOH such that said compound of formula II contains one or two carboxyl groups, wherein m is an integer of 1,2 or 3;

V groups are independently absent or -(CH<sub>2</sub>)<sub>k</sub>- ; k being 1 or 2;

M groups are independently absent or selected from the group consisting of hydrogen, alkyl-amide, hydroxyalkyl and fluoroalkyl, wherein said alkyl has 1, 2 or 3 carbon atoms; and

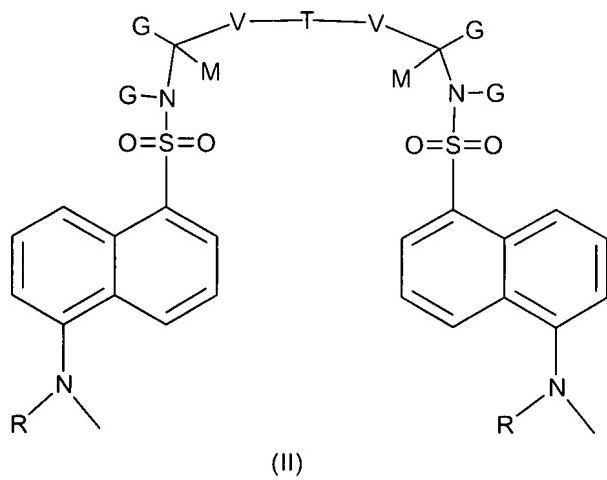
T is -O-, -S-, -NH-, -N(B)-, -Q-, and -N(B'-Q)-, -N(B'-OH)-, -and -N(B'-F)- wherein B is an optionally substituted alkyl of 1, 2, 3, 4, 5 or 6 carbon atoms and B' is an optionally substituted alkylene of 1, 2, 3, 4, 5 or 6 carbon atoms;

Q is a marker for imaging and a metal chelate; said marker for imaging being selected from the group consisting of a fluorescent label, a radio-label, a marker for X-ray, a marker for MRI, or a marker for PET scan; and

R is independently selected from the group consisting of hydrogen, linear or branched alkyl of 1, 2, 3 or 4 carbon atoms, or the group (CH<sub>2</sub>)<sub>m</sub>CH(NH<sub>2</sub>)COOH, wherein m is an integer of 0, 1, 2, 3 or 4;

wherein the chelated metal is selected from the group consisting of Technetium, oxo-technetium, Rhenium and oxo-rhenium radioisotopes.

96. (Currently Amended) A diagnostic agent comprising a compound according to claim 84 a compound represented by the structure set forth in formula (II):



and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of the formula II;

wherein G groups may be the same or different and are selected independently from hydrogen,  $-(CH_2)_m(COOH)$  and COOH such that said compound of formula II contains one or two carboxyl groups, wherein m is an integer of 1,2 or 3;

V groups are independently absent or  $-(CH_2)_k-$ ; k being 1 or 2;

M groups are independently absent or selected from the group consisting of hydrogen, alkyl-amide, hydroxyalkyl and fluoroalkyl, wherein said alkyl has 1, 2 or 3 carbon atoms; and

T is  $-O-$ ,  $-S-$ ,  $-NH-$ ,  $-N(B)-$ ,  $-Q-$ , and  $-N(B'-Q)-$ ,  $-N(B'-OH)-$ , -and  $-N(B'-F)-$  wherein B is an optionally substituted alkyl of 1, 2, 3, 4, 5 or 6 carbon atoms and B' is an optionally substituted alkylene of 1, 2, 3, 4, 5 or 6 carbon atoms;

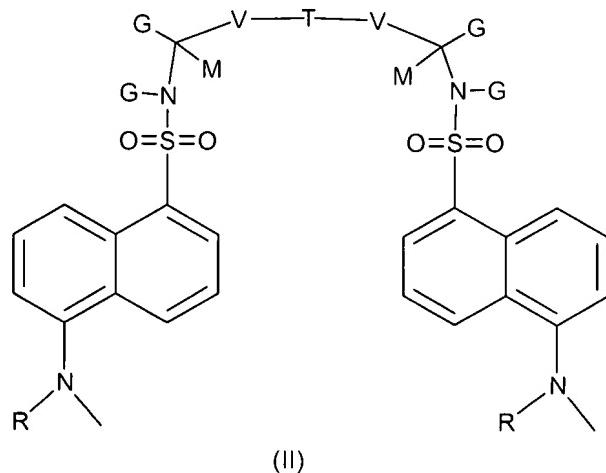
Q is a marker for imaging and a metal chelate; said marker for imaging being selected from the group consisting of a fluorescent label, a radio-label, a marker for X-ray, a marker for MRI, or a marker for PET scan; and

R is independently selected from the group consisting of hydrogen, linear or branched alkyl of 1, 2, 3 or 4 carbon atoms, or the group  $(CH_2)_mCH(NH_2)COOH$ , wherein m is an integer of 0, 1, 2, 3 or 4;

and a metal

97. (Canceled)

98. (Currently Amended) A compound according to claim 84, represented by the structure set forth in formula (II):



November 6, 2007

Page 10 of 16

and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of the formula II;

wherein G groups may be the same or different and are selected independently from hydrogen, -(CH<sub>2</sub>)<sub>m</sub>(COOH) and COOH such that said compound of formula II contains one or two carboxyl groups, wherein m is an integer of 1,2 or 3;

V groups are independently absent or -(CH<sub>2</sub>)<sub>k</sub>- ; k being 1 or 2;

M groups are independently absent or selected from the group consisting of hydrogen, alkyl-amide, hydroxyalkyl and fluoroalkyl, wherein said alkyl has 1, 2 or 3 carbon atoms; and

T is -O-, -S-, -NH-, -N(B)-, -Q-, and -N(B'-Q)-, -N(B'-OH)-, -and -N(B'-F)- wherein B is an optionally substituted alkyl of 1, 2, 3, 4, 5 or 6 carbon atoms and B' is an optionally substituted alkylene of 1, 2, 3, 4, 5 or 6 carbon atoms;

Q is a marker for imaging and a metal chelate; said marker for imaging being selected from the group consisting of a fluorescent label, a radio-label, a marker for X-ray, a marker for MRI, or a marker for PET scan; and

R is independently selected from the group consisting of hydrogen, linear or branched alkyl of 1, 2, 3 or 4 carbon atoms, or the group (CH<sub>2</sub>)<sub>m</sub>CH(NH<sub>2</sub>)COOH, wherein m is an integer of 0, 1, 2, 3 or 4;

comprising or being linked to a marker for imaging, wherein said marker for imaging is selected from a group consisting of Tc, Tc=O, In, Cu, Ga, Xe, Tl, Re and Re=O , <sup>123</sup>I , <sup>131</sup>I , Gd(III), Fe(III), Fe<sub>2</sub>O<sub>3</sub>, Fe<sub>3</sub>O<sub>4</sub>, Mn(II) <sup>18</sup>F, <sup>15</sup>O, <sup>18</sup>O, <sup>11</sup>C, <sup>13</sup>C, <sup>124</sup>I, <sup>13</sup>N, <sup>75</sup>Br, Tc-99m or In-111.

99 – 103 (Cancelled)

104. (Currently Amended) A method according to Claim 103, for the detection of cells undergoing apoptosis, comprising the steps of:

- (i) administering a diagnostic agent according to claim 96; and
- (ii) imaging a patient, so as to identify the presence of cells undergoing apoptosis.

105. (Currently Amended) A method ~~according to Claim 100~~, for the detection of procoagulant particles, selected from activated platelets, platelet-derived microparticles, and apoptotic bodies, comprising the steps of:

- (i) administering a diagnostic agent according to claim 96; and
- (ii) imaging a patient, so as to identify the presence of the procoagulant particles, selected from activated platelets, platelet-derived microparticles, and apoptotic bodies.

106. (Currently Amended) A method ~~according to Claim 100~~, for the detection of a blood clot, comprising the steps of:

- (i) administering a diagnostic agent according to claim 96; and
- (ii) imaging a patient, so as to identify the presence of the blood clot.

107. (Currently Amended) A method ~~according to Claim 100~~, for the detection of activated inflammatory cells, selected from activated white blood cells and activated tissue macrophages, comprising the steps of:

- (i) administering a diagnostic agent according to claim 96; and
- (ii) imaging a patient, so as to identify the presence of the activated inflammatory cells, selected from activated white blood cells and activated tissue macrophages.

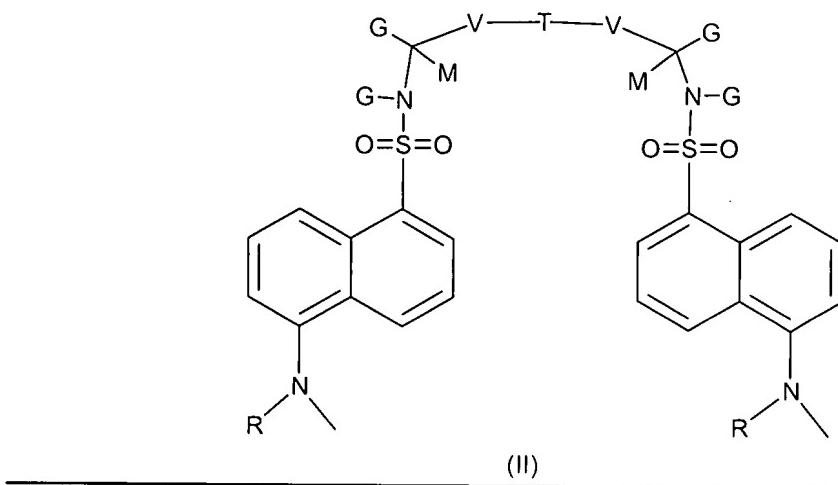
108. (Currently Amended) A method ~~according to Claim 100~~, for detection of cell death within a tumor or for detection of metastases of a tumor, comprising the steps of:

- (i) administering a diagnostic agent according to claim 96; and
- (ii) imaging a patient, so as to identify the presence of the cell death within a tumor or for detection of metastases of a tumor.

109. (Canceled)

110. (Currently Amended) A method for the detection of a cell having a perturbed membrane (PM cell) in a cell sample, the method comprising:

- (i) contacting the cell sample with a an agent comprising a compound according to claim 84 represented by the structure set forth in formula (II):



and pharmaceutically acceptable salts, hydrates, solvates and metal chelates of the compound of the formula II;

wherein G groups may be the same or different and are selected independently from hydrogen, -(CH<sub>2</sub>)<sub>m</sub>(COOH) and COOH such that said compound of formula II contains one or two carboxyl groups, wherein m is an integer of 1,2 or 3;

V groups are independently absent or -(CH<sub>2</sub>)<sub>k</sub>-; k being 1 or 2;

M groups are independently absent or selected from the group consisting of hydrogen, alkyl-amide, hydroxyalkyl and fluoroalkyl, wherein said alkyl has 1, 2 or 3 carbon atoms; and

T is -O-, -S-, -NH-, -N(B)-,-Q-, and -N(B'-Q)-, -N(B'-OH)-, -and -N(B'-F)- wherein B is an optionally substituted alkyl of 1, 2, 3, 4, 5 or 6 carbon atoms and B' is an optionally substituted alkylene of 1, 2, 3, 4, 5 or 6 carbon atoms;

Q is a marker for imaging and a metal chelate; said marker for imaging being selected from the group consisting of a fluorescent label, a radio-label, a marker for X-ray, a marker for MRI, or a marker for PET scan; and

R is independently selected from the group consisting of hydrogen, linear or branched alkyl of 1, 2, 3 or 4 carbon atoms, or the group (CH<sub>2</sub>)<sub>m</sub>CH(NH<sub>2</sub>)COOH, wherein m is an integer of 0, 1, 2, 3 or 4;

(ii) detecting the amount of agent bound to said cell in said sample;

(iii) comparing the amount of agent bound to said cell in said sample with an amount of the agent bound to a control cell, said control cell being a cell maintaining its normal membrane organization;

wherein if more of the agent is bound to said cell in said sample than the amount of agent bound to said control cell, said cell in said sample being detected as a PM cell.